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#1059, MIG-A Sector, Opp. Railwheel Factory,
Yelahanka New Town, Bangalore - 64
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Test Result of Field Density Test

IS:2720 (Part-28) — Date: 30/12/2020

Name of Work : Comprehensive Development works in ward No. 03 Attur

Client		Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.					
Contractor		B.B Umesh (S.M.L.P Asphats)					
Customer Reference		EE(PROJECT)/YNK ZONE/WO/173/2019-20					
Source of Sample		Sample supplied by Agency					
Sample Type		Soil Field Density Test (FDD)					
Date of Test		30/12/2020					
MDD (gm/cc)		1.785					
OMC (%)		10.4					
Field Density		Test 1	Test 2	Test 3	Test 4	Test 5	Test 6
Weight of soil from hole (Ww)	gm	11201	11326	11881	11686	11771	11621
Weight of Sand + Cylinder (W1)	gm	30000	30000	30000	30000	30000	30000
Weight of Sand + Cylinder after pouring (W2)	gm	19499	19414	19109	19149	19174	19284
Weight of Sand in Cone (W3)	gm	2257	2257	2257	2257	2257	2257
Weight of Sand in hole (Wb	gm	8244	8329	8634	8594	8569	8459
Unit Weight of Sand (Gs)	gm/cc	1.321	1.321	1.321	1.321	1.321	1.321
Volume of the hole (v)=Wb/Gs	cc	6240.73	6305.07	6535.96	6505.68	6486.75	6403.48
Bulk Density of Soil ´Y = Ww / v	gm/cc	1.79	1.80	1.82	1.80	1.81	1.81
Moisture content by RMM	%	10.5	9.66	10.4	9.66	10.7	10.4
Dry density of soil ´Y_d = {g /(1 + w / 100)}	gm/cc	1.62	1.64	1.65	1.64	1.64	1.64
Relative Compaction	%	0.9100	0.9177	0.9224	0.9177	0.9183	0.9209
% of Compaction required	%	0.918					

Remarks:

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Test Result of Field Density Test

IS:2720 (Part-28) — Date: 30/12/2020

Name of Work : Comprehensive Development works in ward No. 03 Attur

Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Contractor	B.B Umesh (S.M.L.P Asphats)
Customer Reference	EE(PROJECT)/YNK ZONE/WO/173/2019-20
Source of Sample	Sample supplied by Agency
Sample Type	Soil Field Density Test (FDD)
Date of Test	30/12/2020
MDD (gm/cc)	1.785
OMC (%)	10.4

Field Density		Test 1	Test 2	Test 3	Test 4	Test 5	Test 6
Weight of soil from hole (Ww)	gm	11156	11281	11836	11641	11726	11576
Weight of Sand + Cylinder (W1)	gm	30000	30000	30000	30000	30000	30000
Weight of Sand + Cylinder after pouring (W2)	gm	19452	19367	19062	19102	19127	19237
Weight of Sand in Cone (W3)	gm	2257	2257	2257	2257	2257	2257
Weight of Sand in hole (W_b)	gm	8291	8376	8681	8641	8616	8506
Unit Weight of Sand (Gs)	gm/cc	1.321	1.321	1.321	1.321	1.321	1.321
Volume of the hole (v)=Wb/Gs	cc	6276.31	6340.65	6571.54	6541.26	6522.33	6439.06
Bulk Density of Soil $\gamma = Ww / v$	gm/cc	1.78	1.78	1.80	1.78	1.80	1.80
Moisture content by RMM	%	10.2	9.8	10.6	10.2	10.5	10.8
Dry density of soil $\gamma_d = \{g /(1 + w / 100)\}$	gm/cc	1.61	1.62	1.63	1.61	1.63	1.62
Relative Compaction	%	0.9036	0.9078	0.9123	0.9047	0.9115	0.9090
% of Compaction required	%	0.908					

Remarks:

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Test Result of Field Density Test

IS:2720 (Part-28)

Name of Work : Comprehensive Development works in ward No. 03 Attur

Date: 30/12/2020

Client		Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.					
Contractor		B.B Umesh (S.M.L.P Asphats)					
Customer Reference		EE(PROJECT)/YNK ZONE/WO/173/2019-20					
Source of Sample		Sample supplied by Agency					
Sample Type		Soil Field Density Test (FDD)					
Date of Test		30/12/2020					
MDD (gm/cc)		1.785					
OMC (%)		10.4					
Field Density		Test 1	Test 2	Test 3	Test 4	Test 5	Test 6
Weight of soil from hole (Ww)	gm	11211	11336	11891	11696	11781	11631
Weight of Sand + Cylinder (W1)	gm	30000	30000	30000	30000	30000	30000
Weight of Sand + Cylinder after pouring (W2)	gm	19521	19436	19131	19171	19196	19306
Weight of Sand in Cone (W3)	gm	2257	2257	2257	2257	2257	2257
Weight of Sand in hole (W_b	gm	8222	8307	8612	8572	8547	8437
Unit Weight of Sand (Gs)	gm/cc	1.321	1.321	1.321	1.321	1.321	1.321
Volume of the hole (v)=Wb/Gs	cc	6224.07	6288.42	6519.30	6489.02	6470.10	6386.83
Bulk Density of Soil ˜Y = Ww / v	gm/cc	1.80	1.80	1.82	1.80	1.82	1.82
Moisture content by RMM	%	10.5	9.66	10.4	10	10.73	10.7
Dry density of soil ˜Y_d = {g /(1 + w / 100)}	gm/cc	1.63	1.64	1.65	1.64	1.64	1.65
Relative Compaction	%	0.9132	0.9209	0.9256	0.9180	0.9212	0.9216
% of Compaction required	%	0.920					

Remarks:

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Project	Name of Work : Comprehensive Development works in ward No. 03 Attur
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	AARTN ASSOCIATES Yelahanka Bangalora
Contractor	B.B Umesh (S.M.L.P Asphats)

Field dry Density Test By Sand Replacement Method (As per IS 2720 (Part28))

Layer no. or level		**Date:**	22-7-2021
Depath of hole	WMM 1 layer 250mm		
Field density:		**1**	**2**
Wt.of wet material from hole (Ww) gms.		6234	6124
Wt.of sand+cylinder before pouring (w1) gms		14000	14000
Wt. of sand in cone (w3) gms.		9710	9750
Wt. of sand in hole (w4)=(w1-w2-w3)gms.		835	842
Bulk density of sand (rs)gm/cc		3455	3408
Bulk density of materail(i.e. wt. of the wet material) (rb)-(Ww/w4*(rs))gm/cc		1.3	1.31
Moisture meter reading(moisture content)		2.4	2.35
		12.10	12.10
Result			
FDD(Wt.of the dry material)=(100rb/100+mc)gm/cc		2.11	2.11
MDD		2.140	2.140
OMC		13.50%	13.50%
% compaction obtained		98.53	98.53
% compaction required		98%	98%

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Project	Name of Work : Comprehensive Development works in ward No. 03 Attur
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	AARTN ASSOCIATES Yelahanka Bangalora
Contractor	B.B Umesh (S.M.L.P Asphalts)
Date of Testing	24/07/2021
Type of Mix	WMM
Sample I/D	WMM 2

GRADATION FOR WMM (As per MORT&H 400-11)

Sample Location	At Plant			Date of Sampling	24/07/2021
Type of materail & Purpose	WMM			Date of Testing	24/07/2021
IS Sieve Size in mm	Weight retained	Cummulative weight retained(gm)	Cummulative % of retained	Oven Dry Wt.(gms): 10000.0 Cummulative % of passing	Specification Limits
53	0	0	0.00	100.00	100.00
45	370	370	3.70	96.30	95-100
22.4	2510	2880	28.80	71.20	60-80
11.2	2714	5594	55.94	44.06	40-60
4.75	1414.0	7008	70.08	29.92	25-40
2.36	850.0	7858	78.58	21.42	15-30
0.6	720.0	8578	85.78	14.22	8.0-22.0
0.075	780.0	9358	93.58	6.42	0-8
Pan	642.0				
Total	10000.0				

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Project	Name of Work : Comprehensive Development works in ward No. 03 Attur
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	AARTN ASSOCIATES Yelahanka Bangalora
Contractor	B.B Umesh (S.M.L.P Asphalts)
Date of Testing	24-07-2021
Type of Mix	WMM
Sample I/D	WMM 2

GRADATION FOR WMM

Sample Location: At Plant — per MORT&H 400-11) (As

Type of materail & Purpose: WMM

Date of Sampling: 24/07/2021
Date of Testing: 24/07/2021
Oven Dry Wt.(gms): 10000.0

IS Sieve Size in mm	Weight retained	Cummulative weight retained(gm)	Cummulative % of retained	Cummulative % of passing	Specification Limits
53	0	0	0.00	100.00	100.00
45	370	370	3.70	96.30	95-100
22.4	2510	2880	28.80	71.20	60-80
11.2	2714	5594	55.94	44.06	40-60
4.75	1414.0	7008	70.08	29.92	25-40
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0.075	780.0	9358	93.58	6.42	0-8
Pan	642.0				
Total	10000.0				

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Project	Name of Work : Comprehensive Development works in ward No. 03 Attur
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	AARTN ASSOCIATES Yelahanka Bangalora
Contractor	B.B Umesh (S.M.L.P Asphalts)
Date of Testing	26/07/2021
Type of Mix	WMM
Sample I/D	WMM 2

GRADATION FOR WMM (As

Sample Location	At Plant	Date of Sampling	26/07/2021
		Date of Testing	26/07/2021
Type of materail & Purpose	WMM	Oven Dry Wt.(gms):	10000.0

IS Sieve Size in mm	Weight retained	Cummulative weight retained(gm)	Cummulative % of retained	Cummulative % of passing	Specification Limits
53	0	0	0.00	100.00	100.00
45	370	370	3.70	96.30	95-100
22.4	2510	2880	28.80	71.20	60-80
11.2	2714	5594	55.94	44.06	40-60
4.75	1414.0	7008	70.08	29.92	25-40
2.36	850.0	7858	78.58	21.42	15-30
0.6	720.0	8578	85.78	14.22	8.0-22.0
0.075	780.0	9358	93.58	6.42	0-8
Pan	642.0				
Total	10000.0				

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Project	Name of Work : Comprehensive Development works in ward No. 03 Attur
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	AARTN ASSOCIATES Yelahanka Bangalora
Contractor	B.B Umesh (S.M.L.P Asphalts)
Date of Testing	28/07/2021
Type of Mix	WMM
Sample I/D	WMM 2

GRADATION FOR WMM (As per MORT&H 400-11)

Sample Location	At Plant	Date of Sampling	28/07/2021
		Date of Testing	28/07/2021
Type of materail & Purpose	WMM	Oven Dry Wt.(gms):	10000.0

IS Sieve Size in mm	Weight retained	Cummulative weight retained(gm)	Cummulative % of retained	Cummulative % of passing	Specification Limits
53	0	0	0.00	100.00	100.00
45	370	370	3.70	96.30	95-100
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0.075	780.0	9358	93.58	6.42	0-8
Pan	642.0				
Total	10000.0				

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Project	Name of Work : Comprehensive Development works in ward No. 03 Attur
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	AARTN ASSOCIATES Yelahanka Bangalora
Contractor	B.B Umesh (S.M.L.P Asphalts)
Date of Testing	28/07/2021
Type of Mix	WMM
Sample I/D	WMM 2

GRADATION FOR WMM (As per MORT&H 400-11)

Sample Location	At Plant	Date of Sampling	28/07/2021
		Date of Testing	28/07/2021
Type of materail & Purpose	WMM	Oven Dry Wt.(gms):	10000.0

IS Sieve Size in mm	Weight retained	Cummulative weight retained(gm)	Cummulative % of retained	Cummulative % of passing	Specification Limits
53	0	0	0.00	100.00	100.00
45	370	370	3.70	96.30	95-100
22.4	2510	2880	28.80	71.20	60-80
11.2	2714	5594	55.94	44.06	40-60
4.75	1414.0	7008	70.08	29.92	25-40
2.36	850.0	7858	78.58	21.42	15-30
0.6	720.0	8578	85.78	14.22	8.0-22.0
0.075	780.0	9358	93.58	6.42	0-8
Pan	642.0				
Total	10000.0				

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Project	Name of Work : Comprehensive Development works in ward No. 03 Attur
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	AARTN ASSOCIATES Yelahanka Bangalora
Contractor	B.B Umesh (S.M.L.P Asphalts)
Date of Testing	28/07/2021
Type of Mix	WMM
Sample I/D	WMM 2

GRADATION FOR WMM (As per MORT&H 400-11)

Sample Location	At Plant	Date of Sampling	28/07/2021
		Date of Testing	28/07/2021
Type of materail & Purpose	WMM	Oven Dry Wt.(gms):	10000.0

IS Sieve Size in mm	Weight retained	Cummulative weight retained(gm)	Cummulative % of retained	Cummulative % of passing	Specification Limits
53	0	0	0.00	100.00	100.00
45	370	370	3.70	96.30	95-100
22.4	2510	2880	28.80	71.20	60-80
11.2	2714	5594	55.94	44.06	40-60
4.75	1414.0	7008	70.08	29.92	25-40
2.36	850.0	7858	78.58	21.42	15-30
0.6	720.0	8578	85.78	14.22	8.0-22.0
0.075	780.0	9358	93.58	6.42	0-8
Pan	642.0				
Total	10000.0				

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Project	Name of Work : Comprehensive Development works in ward No. 03 Attur
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	AARTN ASSOCIATES Yelahanka Bangalora
Contractor	B.B Umesh (S.M.L.P Asphats)

Field dry Density Test By Sand Replacement Method (As per IS 2720 (Part28))

Date: 30-07-2021

Layer no. or level	WMM 1 layer	
Depath of hole	250mm	
Field density:	**1**	**2**
Wt.of wet material from hole (Ww) gms.	6234	6124
Wt.of sand+cylinder before pouring (w1) gms	14000	14000
Wt.of sand+cylinder before pouring (w2) gms	9710	9750
Wt. of sand in cone (w3) gms.	835	842
Wt. of sand in hole (w4)=(w1-w2-w3)gms.	3455	3408
Bulk density of sand (rs)gm/cc	1.3	1.31
Bulk density of materail(i.e. wt. of the wet material) (rb)-{Ww/w4*(rs)}gm/cc	2.4	2.35
Moisture meter reading(moisture content)	12.10	12.10
Result		
FDD(Wt.of the dry material)=(100rb/100+mc)gm/cc	2.11	2.11
MDD	2.140	2.140
OMC	13.50%	13.50%
% compaction obtained	98.53	98.53
% compaction required	98%	98%

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Test Report

DETERMINATION OF RATE OF SPRED TACK COAT

Name of Work	:	Comprehensive Development works in ward No. 03 Attur
Client	:	Bruhat Bengaluru Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	:	Arun kumar Das (AARTN ASSOCIATES)
Contractor	:	B.B Umesh (S.M.L.P Asphalts)
Customer Reference	:	EE(PROJECT)/YNK ZONE/WO/173/2019-20
Date of Testing	:	03/08/2021
Type of Mix	:	Tack coat
Sample I/D	:	1

DETERMINATION OF RATE OF SPRED TACK COAT

Determination	Unit	Test No	
		1	2
Size of Plate (mxm)	M	0.30 X0.30	0.30 X0.30
Area of Plate (a)	Sq.mtr	0.09	0.09
Initial Wt of empty Plate(b)	Kg	0.78	0.748
Final weight of plate after application of tack Coat (C)	Kg	0.803	0.771
Weight of tack Coat (d=c-b)	Kg	0.023	0.023
Rate of spread of tack coat	Kg/ sq. m	0.256	0.256
Average	Kg/ sq. m	0.256	
Specified Limit	Kg/ sq. m	**0.250 Kg/ sq.m**	

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Test Report

DETERMINATION OF RATE OF SPRED TACK COAT

Name of Work	:	Comprehensive Development works in ward No. 03 Attur
Client	:	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	:	Arun kumar Das (AARTN ASSOCIATES)
Contractor	:	B.B Umesh (S.M.L.P Asphalts)
Customer Reference	:	EE(PROJECT)/YNK ZONE/WO/173/2019-20
Date of Testing	:	04-08-201
Type of Mix	:	Tack coat
Sample I/D	:	1

DETERMINATION OF RATE OF SPRED TACK COAT

Determination	Unit	Test No	
		1	2
Size of Plate (mxm)	Mt	0.30 X0.30	0.30 X0.30
Area of Plate (a)	Sq.mtr	0.09	0.09
Initial Wt of empty Plate(b)	Kg	0.78	0.748
Final weight of plate after application of tack Coat (C)	Kg	0.803	0.771
Weight of tack Coat (d=c-b)	Kg	0.023	0.023
Rate of spread of tack coat	Kg/ sq. m	0.256	0.256
Average	Kg/ sq. m	0.256	
Specified Limit	Kg/ sq. m	**0.250 Kg/ sq.m**	

Consultant

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Test Report

DETERMINATION OF RATE OF SPRED TACK COAT

Name of Work	:	Comprehensive Development works in ward No. 03 Attur
Client	:	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	:	Arun kumar Das (AARTN ASSOCIATES)
Contractor	:	B.B Umesh (S.M.L.P Asphats)
Customer Reference	:	EE(PROJECT)/YNK ZONE/WO/173/2019-20
Date of Testing	:	10/08/2021
Type of Mix	:	Tack coat
Sample I/D	:	1

DETERMINATION OF RATE OF SPRED TACK COAT

Determination	Unit	Test No	
		1	2
Size of Plate (mxm)	Mt	0.30 X0.30	0.30 X0.30
Area of Plate (a)	Sq.mtr	0.09	0.09
Initial Wt of empty Plate(b)	Kg	0.749	0.784
Final weight of plate after application of tack Coat (C)	Kg	0.817	0.807
Weight of tack Coat (d=c-b)	Kg	0.023	0.023
Rate of spread of tack coat	Kg/ sq. m	0.256	0.256
Average	Kg/ sq. m	0.256	
Specified Limit	Kg/ sq. m	**0.250 Kg/ sq.m**	

Consultant

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The Modern Construction Solutions

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Yelahanka New Town, Bangalore - 64
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Test Report

DETERMINATION OF BITUMEN CONTENT AND GRADATION DENSE BITUMOUS MACADAM MIX

Name of Work	:	Comprehensive Development works in ward No. 03 Attur
Client	:	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	:	Arun kumar Das (AARTN ASSOCIATES)
Contractor	:	B.B Umesh (S.M.L.P Asphats)
Customer Reference	:	EE(PROJECT)/YNK ZONE/WO/173/2019-20
Date of Testing	:	03/08/2021
Type of Mix	:	DBM
Sample I/D	:	DBM-1

GRADATION FOR DBM

(As per MORTH& 500-10, Grading-2)

Sample Location :	At plant	Date Of Sampling:	03/08/2021
		Date of testing:	03/08/2021
Type of material & Purpose:	DBM	Over Dry Wt. (gms):	1500

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % retained	Cummulative % passing	Specification limits
37.50	0	0	0	100.00	100.00
26.50	80	80	5.33	94.67	90-100
19.00	110	190	12.67	87.33	71-95
13.20	230	420	28.00	72.00	56-80
4.750	340	760	50.67	49.33	38-54
2.360	185	945	63.00	37.00	28-42
0.300	280	1225	81.67	18.33	7-21
0.075	180	1405	93.67	6.33	2-8
Pan	95				
Total	1500				

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Project	Comprehensive Development works in ward No. 03 Attur
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	AARTN ASSOCIATES Yelahanka Bangalora
Contractor	B.B Umesh (S.M.L.P Asphats)

AGGREGATE IMPACT VALUE (IS: 2386 Part-4)

Proposed Use	DBM	Date of Sampling	03/08/2021
Sample Location	At Plant	Date of Testing	03/08/2021

Sl.No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit(%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	392.00	372.00	378.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	296.00	280.00	275.00	
3	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wc)	96.00	92.00	103.00	
4	Aggregate Impact Value (%)	(Wc/Wa)*100	24.49	24.73	27.25	
5	Average Aggregate impact value	(%)	25.49			Max - 30%
Remarks :		Satisfactory / Not Satisfactory				

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Project	Comprehensive Development works in ward No. 03 Attur
Client	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bangaluru.
Consultant	AARTN ASSOCIATES Yelahanka Bangalore
Contractor	B.B Umesh (S.M.L.P Asphalts)

FLAKINESS AND ELONGATION INDICES(IS 2386, PART 1)

Proposed Use		DBM		Proposed Use	DBM
Sample Location		At Plant		Date of Sampling	03/08/2021
				Date of Testing	03/08/2021
Size of Aggregate		Flakiness Index		Elongation Index	
Passing through IS sieve,mm	Retained on IS sieve, mm	Total wt. of aggregate retained on sieves(A) gms.	Wt.of aggregate passing from Flakiness gauge(B) gms	Wt.of aggregate retained on Flakiness gauge(C) gms	Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D) gms
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	7850	680	7170	380.00
31.5	25.0	4256	205	3569	290.00
25.0	20.0	2450	270	1978	210.00
20.0	16.0	1568	340	1000	270.00
16.0	12.5	560	98	462	158.00
12.5	10.0	280	60	230	89.00
10.0	6.3	130	80	80	56
Total		17094	1733	14489	1451

Results		
	Flakiness Index(%)	10.14
	Elongation Index(%)	10.01
	Combined FI+EL(%)	20.15

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Test Report

Name of work	:	Compressive in Development works in ward No. 03 Attur
Client	:	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	:	Arun kumar Das (AARTN ASSOCIATES)
Contractor	:	B.B Umesh (S.M.L.P Asphalts)
Customer Reference	:	EE(PROJECT)/YNK ZONE/WO/173/2019-20
Date of Testing	:	03/08/2021
Type of Mix	:	DBM
Sample I/D	:	DBM-1

DETERMINATION OF BITUMEN CONTENT

Descripiton	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	825	850
2. Weight of Mixture after extraction, g	789	813
3. Weight of Bitumen	36	37
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.00	4.00
6. Weight of fines, g	2.00	2.00
7. Weight of Bitumen & fines	38	39.00
8. Bitumen content in %	4.61	4.59
9. Average Bitumen content in %	4.60	
10. Minimum Bitumen content in %	4.50	

GRADATION FOR DBM AFTER EXTRACTION

(As per MORTH& 500-10, Grading-2)

Sample Location :	At Site	Date Of Sampling:	03/08/2021
		Date of testing:	03/08/2021
Type of material & Purpose:	DBM	Over Dry Wt. (gms):	789.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % retained	Cummulative % passing	Specification limits
37.50	0.0	0.0	0.0	100.00	100.00
26.50	40.0	40.0	5.1	94.93	90-100
19.00	110.0	150.0	19.01	80.99	71-95
13.20	115.0	265.0	33.59	66.41	56-80
4.750	172.0	437.0	55.39	44.61	38-54
2.360	90.0	527.0	66.79	33.21	28-42
0.300	135.0	662.0	83.90	16.1	7-21
0.075	78.0	740.0	93.79	6.21	2-8
Pan	49.0				
Total	789.0				

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Test Report

Name of Work	:	Comprehensive Development works in ward No. 03 Attur
Client	:	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	:	Arun kumar Das (AARTN ASSOCIATES)
Contractor	:	B.B Umesh (S.M.L.P Asphalts)
Customer Reference	:	EE(PROJECT)/YNK ZONE/WO/173/2019-20
Date of Testing	:	03/08/2021
Type of Mix	:	DBM
Sample I/D	:	DBM-1

DETERMINATION OF BITUMEN CONTENT

Descripiton	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	825	850
2. Weight of Mixture after extraction, g	789	813
3. Weight of Bitumen	36	37
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.00	4.00
6. Weight of fines, g	2.00	2.00
7. Weight of Bitumen & fines	38	39.00
8. Bitumen content in %	4.61	4.59
9. Average Bitumen content in %	4.60	
10. Minimum Bitumen content in %	4.50	

GRADATION FOR DBM AFTER EXTRACTION

(As per MORTH& 500-10, Grading-2)

Sample Location :	At Site	Date Of Sampling:	03/08/2021
		Date of testing:	03/08/2021
Type of material & Purpose:	DBM	Over Dry Wt. (gms):	789.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % retained	Cummulative % passing	Specification limits
37.50	0.0	0.0	0.0	100.00	100.00
26.50	40.0	40.0	5.1	94.93	90-100
19.00	110.0	150.0	19.01	80.99	71-95
13.20	115.0	265.0	33.59	66.41	56-80
4.750	172.0	437.0	55.39	44.61	38-54
2.360	90.0	527.0	66.79	33.21	28-42
0.300	135.0	662.0	83.90	16.1	7-21
0.075	78.0	740.0	93.79	6.21	2-8
Pan	49.0				
Total	789.0				

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Test Report

BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE BITUMINOUS MACADAM MIX

Name of Work	:	Comprehensive Development works in ward No. 03 Attur
Client	:	Bruhat Bengalore Mahanagara Palike (BBMP) , Yelahanka Zone, Bengaluru.
Consultant	:	Arun kumar Das (AARTN ASSOCIATES)
Contractor	:	B.B Umesh (S.M.L.P Asphats)
Customer Reference	:	EE(PROJECT)/YNK ZONE/WO/173/2019-20
Date of Testing	:	04/08/2021
Type of Mix	:	DBM
Sample I/D	:	DBM-1

DETERMINATION OF BITUMEN CONTENT

Descripiton	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	835	945
2. Weight of Mixture after extraction, g	799	904
3. Weight of Bitumen	36	41
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.00	4.00
6. Weight of fines, g	2.00	2.00
7. Weight of Bitumen & fines	38	43.00
8. Bitumen content in %	4.55	4.55
9. Average Bitumen content in %	4.55	
10. Minimum Bitumen content in %	4.50	

GRADATION FOR DBM AFTER EXTRACTION

(As per MORTH& 500-10, Grading-2)

Sample Location :	At Site	Date Of Sampling:	04/08/2021
		Date of testing:	04/08/2021
Type of material & Purpose:	DBM	Over Dry Wt. (gms):	799.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % retained	Cummulative % passing	Specification limits
37.50	0.0	0.0	0.0	100.00	100.00
26.50	38.0	38.0	4.8	95.24	90-100
19.00	120.0	158.0	19.77	80.23	71-95
13.20	110.0	268.0	33.54	66.46	56-80
4.750	160.0	428.0	53.57	46.43	38-54
2.360	89.0	517.0	64.71	35.29	28-42
0.300	128.0	645.0	80.73	19.27	7-21
0.075	100.0	745.0	93.24	6.76	2-8
Pan	54.0				
Total	799.0				

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